

MiCorps Grant Close Out Report

Project name: Volunteer Stream Monitoring Program

Grantee name: Mid-Michigan Environmental Action Council (Mid-MEAC)

Project goals:

- 1) Improve water quality in the Red Cedar River Watershed.
- 2) Improve awareness of water quality issues facing the Red Cedar River Watershed.
- 3) Increase level of community and individual commitment to water quality stewardship.

Project objectives:

- 1) Recruit, train, maintain, and coordinate at least 6 new volunteers and provide refresher training to at least 8 existing volunteers; monitor at least 4 sites along the Red Cedar River Watershed 2 times per year, for at least 10 years. (First 2 years to be covered by this grant; additional volunteers and sites to be added in future years.)
- 2) Coordinate annual fall and spring volunteer benthic invertebrate sampling days and identification sessions; and summer habitat assessments.
- 3) Provide monitoring data to the MiCorps, MDEQ, Greater Regional Committee on Stormwater Management (GLRC), and the public.
- 4) Work with the GLRC and other Mid-MEAC partners to identify projects and public education programs to help improve water quality.
- 5) Inform Mid-Michigan citizens about issues at the various sites as they pertain to local planning, land-use, or permitting decisions and encouraging citizen groups to attend the watershed management public meetings to provide their input and offer solutions to problems.

Extent to which goals and objectives were met:

We successfully met our goal of improving awareness of water quality issues facing the Red Cedar River Watershed. This was done in a couple of different ways. The most significant way was the recruitment, training, and coordination of volunteers for annual fall and spring volunteer benthic invertebrate sampling days and identification sessions, and summer habitat assessments. Another way in which we improved awareness of water quality issues facing the Red Cedar River Watershed was through data communication. Methods of data communication included the following: entering collected data into MiCorps exchange database, posting links from the Mid-MEAC website, and our monthly electronic newsletter, which reaches over 1600 people, including 20 media contacts. In the future Mid-MEAC will begin to explore other ways to report and use data, such as creating more graphic reporting formats (charts, graphs, maps), and drawing some conclusions about the monitoring sites based on the stream quality index scores and habitat assessments.

We successfully met our goal of increasing the level of individual and community commitment to water quality stewardship. The way in which this was accomplished was the recruitment, training, and coordination of volunteers for annual fall and spring volunteer benthic invertebrate sampling days and identification sessions, and summer habitat assessments. In the future Mid-MEAC will work to add additional monitoring sites as well as recruit and train additional volunteers.

We did not successfully meet our goal of improving water quality in the Red Cedar River Watershed for a couple of different reasons. The first reason is that we only have 2 years worth of data, so we are still in the process of collecting enough data to give a reliable indication of stream health, without which we cannot begin to figure out actions to take to improve water quality. We are also lacking enough scientific background as an organization to be able to figure out what actions to take in utilizing our data to improve water quality in the Red Cedar River Watershed. In the future Mid-MEAC will continue to collect data on water quality as well as seek to collaborate with partners who have knowledge and ideas on what steps we should take in utilizing our data to improve water quality in the Red Cedar River Watershed.

We successfully met our objective to coordinate annual fall and spring volunteer benthic invertebrate sampling days and identification sessions, and summer habitat assessments. Volunteer benthic invertebrate sampling days and identification sessions were held in the fall of 2006, spring and fall of 2007, and spring of 2008. A summer habitat assessment was completed in July of 2007.

We successfully met our objective to provide monitoring data to MiCorps, MDEQ, Greater Lansing Regional Committee on Stormwater Management (GLRC), and the public. This was accomplished through posting our data on the MiCorps exchange website, communicating our data to the MDEQ and GLRC, posting links on the Mid-MEAC website, and including data in our monthly electronic newsletter.

We successfully met our objective to recruit, train, maintain, and coordinate at least 6 new volunteers and provider refresher training to at least 8 existing volunteers, and to monitor at least 4 sites along the Red Cedar River Watershed 2 times per year. We sampled 4 sites in the fall of 2006, and we sampled 6 sites in the spring and fall of 2007 and spring of 2008. However, we were unable to sample one of our sites in the spring of 2007 due to heavy rains and swelling of the stream, therefore no data was collected for this site during the spring of 2007. Two-hour trainings for collection were held in September of 2006 and 2007, and in October of 2008. A one-hour training for macroinvertebrate ID was held on October of 2006. A 45-minute training for habitat assessment was held in July of 2007. There were 10-15 volunteers at each monitoring, training, and ID session.

We successfully met our objective of working with GLRC and other Mid-MEAC partners to identify projects and other public education programs to help improve water quality. In the fall of 2008 we launched our Low Impact Development (LID) Promotion and Ordinance Project. We are working to promote low impact development practices

such as the use of downspout disconnections, rain barrels, rain gardens, pervious pavement, no-mow zones, etc. In 2008 and 2009 we will be working with local partners to implement low-impact development practices and policies in the Greater Lansing area, using grassroots advocacy, education, and policy changes.

We successfully met our objective to inform Mid-Michigan citizens about issues at the various sites as they pertain to local planning, land-use, or permitting decisions and encouraging citizen groups to attend the watershed management public meetings to provide their input and offer solutions to problems. On October 3rd, Ingham County Drain Commissioner Pat Lindemann, Becky Jo Farrington of Clean Water Action, and a few others presented about greening the Frandor area using LID techniques. About 40 people attended this luncheon that was promoted through our website, e-news letter, and other contacts. During the fall/winter of 2008 we held a Land Use Lunch guest speaker series to inform policy makers, advocates, and the interested public about local land use issues.

Description of environmental and other benefits of the project:

The volunteer benthic invertebrate sampling days are at the core of the environmental benefits of this project. These days not only allowed for volunteers to learn about stream ecosystems and some of their inhabiting organisms, but it gave them a change to directly connect with and experience the natural environment. These days enhanced the knowledge, awareness, and appreciation of our volunteers for water quality and provided them with the tools to spread awareness about water quality and make decisions to positively affect the natural environment.

The identification sessions are another way in which volunteers were able to directly connect with the natural world, and enhance their knowledge of the organisms that inhabit local streams. This allowed for a deeper appreciation of stream ecosystems and for volunteers to become familiar with stream dwelling organisms that are rarely seen with the human eye. The identification sessions also allowed for volunteers to reconnect with sampling days and become involved with calculating stream quality index scores.

The indirect benefits came from data communication. Those who did not volunteer for this program were allowed to see its results in various form such as the MiCorps data exchange website, Mid-MEAC website and electronic newsletter, and through communication with agencies such as MDEQ and GLRC. In this way our efforts and activities were able to be spread widely through information sharing.

We have learned that we need to give volunteers plenty of advance notice in scheduling, and work around their schedules to select our monitoring days. In this way we can accommodate to the schedules of our volunteers and get a higher number of volunteers at each session, avoiding conflicts with other events such as MSU home football games. We have also learned that volunteer feedback is a great way to improve the program, and we'd like to continue getting more volunteer feedback as we are experiencing some attrition/drop off in our volunteer turnout. We have realized that volunteer recruitment must be an ongoing part of the program because of the attrition

problem, and in order to add any new sites we need new volunteers. We are developing new partnerships and doing more outreach in the communities where we have sites, as well as identifying and contacting Mid-Michigan's outdoor groups in order to increase our volunteer recruitment efforts.

Every session was followed up with volunteer feedback. Volunteers could either fill out a form directly after the session or at a later time online, and most volunteers did one or the other. We also encourage discussion after each session to find out how we can improve the program.

List of all partners and their contributions:

MiCorps provided an 8 hour training session and grant funding. They also received monitoring data on their exchange website and helped determine sample site locations.

MSU helped determine sample site locations; Geoff Habron from the Department of Fisheries and Wildlife currently acts as Program Advisor with the following responsibilities: assisting with Quality Assurance Project Plan, reviewing overall program at least once per year and making suggestions for improvements, helping to identify monitoring sites along the Red Cedar River, providing additional support and expertise at macroinvertebrate collection trainings, habitat assessment trainings, and macroinvertebrate identification sessions

Ingham County Drain Commissioner's Office helped determine sample site locations.

Tri-County Regional Planning Commission helped determine sample site locations.

Greater Lansing Regional Committee for Stormwater Management – determining sample site locations

Tetra Tech – providing facilities, equipment, and expertise for identification sessions

MDEQ has been a great source of volunteers for the collection and identification sessions.

Friends of the Looking Glass River has allowed us to use equipment such as nets, waders, and other supplies.

Completed products:

- Mid-MEAC's Volunteer Stream Monitoring webpage
- Mid-MEAC's Volunteer Stream Monitoring Program PowerPoint
- Quality Assurance Project Plan: Volunteer Stream Monitoring Grant Program
- Excel chart and graph of stream quality index scores for fall 2006 – spring 2008
- Mid-MEAC Volunteer Stream Monitoring Flyer (used in several exhibits/ displays throughout the year)

- Mid-MEAC Stream Monitoring Basics handout
- Habitat Definitions reference sheet
- Site Packets for each of our monitoring locations
- Supplies and Equipment checklist for macroinvertebrate collection
- Volunteer Stream Monitoring web pages at <http://www.midmeac.org/streammonitoring.html>

Discussion of Project Sustainability:

Mid-MEAC will continue its Volunteer Stream Monitoring Program beyond the timeline of the MiCorps grant. Funding has been secured from the Lansing Board of Water and Light and the Greater Lansing Regional Committee for Stormwater Management for future monitoring and activities. We will continue to monitor our current sites as well as identify and add future monitoring sites. We will also continue to recruit and train new volunteers, as well as work to retain as many existing volunteers as possible.

Along with adding new sites and volunteers, Mid-MEAC will expand its Volunteer Stream Monitoring Program by networking and collaborating with individuals and agencies to look at ways to utilize our data to improve water quality in the Red Cedar River Watershed. Mid-MEAC will work with GLRC and other partners to identify projects and public education programs to help improve water quality. Mid-MEAC will also continue to search for new program partners and funders.

Significant Photos



Volunteer stream monitoring training



Bug identification session



Stream monitoring on the west branch of the Red Cedar River



Searching for specimens